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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,963	12/03/2003	Greg Moller	BW1-0012US	7416

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EXAMINER	
SAVAGE, MATTHEW O	

ART UNIT	PAPER NUMBER
1724	

NOTIFICATION DATE	DELIVERY MODE
07/24/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lhpto@leehayes.com

Office Action Summary	Application No.	Applicant(s)	
	10/727,963	MOLLER ET AL.	
	Examiner	Art Unit	
	Matthew O. Savage	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,5,9,10,13 and 33-47* is/are pending in the application.

4a) Of the above claim(s) *33,34,41-43 and 45* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5,9,10,13,35-40,44,46 and 47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7-3-07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claims 33, 34, 41-43, and 45 have been withdrawn as being directed to a non-elected species.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4, 5, 9, 10, 13, 35-40, 44, 46, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nikolaidis et al in view of Schade.

With respect to claims 1, 4, 9, 13, and 39, Nikolaidis et al disclose a reactive filtration method including filtering contaminants from fluid/waste water flowing through the filter media composed of sand and iron filings (see FIG. 5 and lines 44-67 of col. 6). Nikolaidis et al fail to specify continuously regenerating the filter media/iron oxide coated sand bed while simultaneously filtering contaminants from fluid/waste water flowing through the filter media. Schade discloses a filtration method including regenerating a filter media (e.g., filtering sand, see FIG. 1)) within a vessel 12 while simultaneously flowing fluid/waste water through the filter media, the waste water being passed through a moving sand bed (e.g., the sand bed being moved by the regeneration step), the process being effective to remove the contaminants from the vessel from a majority of the water (e.g., via withdrawal tube 35). Schade teaches that such a method enables continuous filtration of a fluid/waste water without having to stop the process to regenerate the media. It would have been obvious to have modified the process of

Nikolaidis et al so as to have included the continuous filtration method steps of Schade in order to enable continuous filtration of a fluid/waste water without having to stop the process to regenerate the media.

As to claims 2, 5, and 10 Nikolaidis et al include a reactive filter media composed of metal/iron granules and filter media/sand.

Concerning claim 35, the process suggested by Nikolaidis et al and Schade would inherently regenerate reactive surfaces on the iron oxide coated sand bed to which contaminants can bond during the regeneration step in which the particles are conveyed through the air lift device 17 (see FIG. 1 of Schade).

Regarding claim 36, the process suggested by Nikolaidis et al and Schade discloses filtering solid forms of the contaminants with a sand bed and regenerating reactive surfaces on the iron oxide coated sand bed to which contaminants can bond during the regeneration step in which the particles are conveyed through the air lift device 17.

As to claim 37, the process suggested by Nikolaidis et al and Schade discloses removing at least a portion of the bonded and filtered contaminants from a vessel that defines the sand bed (e.g., via the withdrawal tube 35 disclosed by Schade shown in FIG. 1).

Regarding claim 38, Schade discloses removing the portion (e.g., via withdrawal tube 35) from a majority of the water.

With respect to claim 40, Nikolaidis et al disclose filtering contaminants from fluid flowing through a first portion of a reactive filter media. Nikolaidis et al fail to specify

agitating a second portion of reactive filter media to continuously regenerate the reactive filter media. Schade disclose filtering contaminants from fluid flowing through a first portion 32 of a filter media (see FIG. 1) while agitating a second portion of the filter media (e.g., via air lift device 17) to continuously regenerate the filter media. Schade teaches that such a method enables continuous filtration of a fluid/waste water without having to stop the process to regenerate the media. It would have been obvious to have modified the process of Nikolaidis et al so as to have included the continuous filtration method steps of Schade in order to enable continuous filtration of a fluid/waste water without having to stop the process to regenerate the media.

With respect to claim 44, Nikolaidis et al disclose flowing contaminated water through a filter chamber 58 of reactive filter media to generate a mixture (see FIG. 5). Nikolaidis et al fail to specify agitating the mixture in a separator to separate contaminants from the mixture and to regenerate the reactive filter media; and, recycling the regenerated reactive filter media into the filter chamber. Schade discloses agitating the mixture in a separator to separate contaminants from the mixture and to regenerate the reactive filter media (e.g., formed by air lift 17, tube 18, cap 8,and baffle 33); and, recycling the regenerated reactive filter media into the filter chamber (e.g., via conical head piece 5). Schade teaches that such a method enables continuous filtration of a fluid/waste water without having to stop the process to regenerate the media. It would have been obvious to have modified the process of Nikolaidis et al so as to have included the continuous filtration method steps of Schade in order to enable continuous

filtration of a fluid/waste water without having to stop the process to regenerate the media.

With respect to claim 46, Nikolaidis et al disclose physically capturing contaminants from water with a filter media (e.g., the sand bed), and chemically capturing contaminants from the water with the filter media (e.g., with the iron filings). Nikolaidis et al fail to specify separating the captured contaminants from the filter media and recycling the separated filter media to capture additional contaminants. Schade discloses separating the captured contaminants from the filter media (e.g., via the separator formed by air lift 17, tube 18, cap 8,and baffle 33) and recycling the separated filter media to capture additional contaminants (e.g., via conical head piece 5). Schade teaches that such a method enables continuous filtration of a fluid/waste water without having to stop the process to regenerate the media. It would have been obvious to have modified the process of Nikolaidis et al so as to have included the continuous filtration method steps of Schade in order to enable continuous filtration of a fluid/waste water without having to stop the process to regenerate the media.

Regarding claim 47, Schade discloses removing the portion (e.g., via withdrawal tube 35) from a majority of the water.

Claims 1, 2, 4, 5, 9, 10 and 13 are again provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being anticipated by claims 8 and 10 of Application Serial No. 11/171,002. As pointed out in the previous Office action, claims 1,2, 4, 5, 9, 10 and 13 of this application do not preclude an ozone

oxidation treatment, these instant claims are deemed to be encompassed by claims 8 and 10 of Application Serial No. 11/171,002.

This is a provisional obviousness-type double patenting rejection.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887,225 USPQ 645 (Fed. Cir. 1985); In re Van Omum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b)

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew O. Savage whose telephone number is (571) 272-1146. The examiner can normally be reached on Monday-Friday, 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Matthew O. Savage

Matthew O Savage
Primary Examiner
Art Unit 1724

mos